COMSAT Mobile Communications

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF SECRETARY

May 4, 1994

Mr. William F. Caton
Acting Secretary
Federal Communications Commission
1919 M Street, N.W.
Room 222
Washington, D.C. 20554

Ref: Ex Parte Contact in GEN Docket No. 90-314

Dear Mr. Caton:

Members of the MSS Spectrum Coalition, including representatives of COMSAT Mobile Communications, Iridium, Inc., AMSC and Loral/Qualcomm, met with Mr. Michael Katz, Chief Economist, and members of the staff of the Office of Plans and Policy to repeat the briefing provided to the PCS Task Force on April 14, 1994 (previously provided in a separate Ex Parte statement) and to answer questions from the FCC participants about this briefing. The only other documentation provided to the FCC participants at this meeting was a copy of a study performed for COMSAT Mobile Communications by Arthur D. Little which was previously furnished to the Commission in another docket. A copy is enclosed.

Respectfully submitted,

John S. Hannon, Jr.

Enclosure

Impact of COMSAT Mobile Communications Programs on the U.S. Economy

Background Paper

Prepared by

Arthur D. Little, Inc.

December 1993

Arthur D Little

Over the past two years increasing attention has been paid to global mobile satellite services

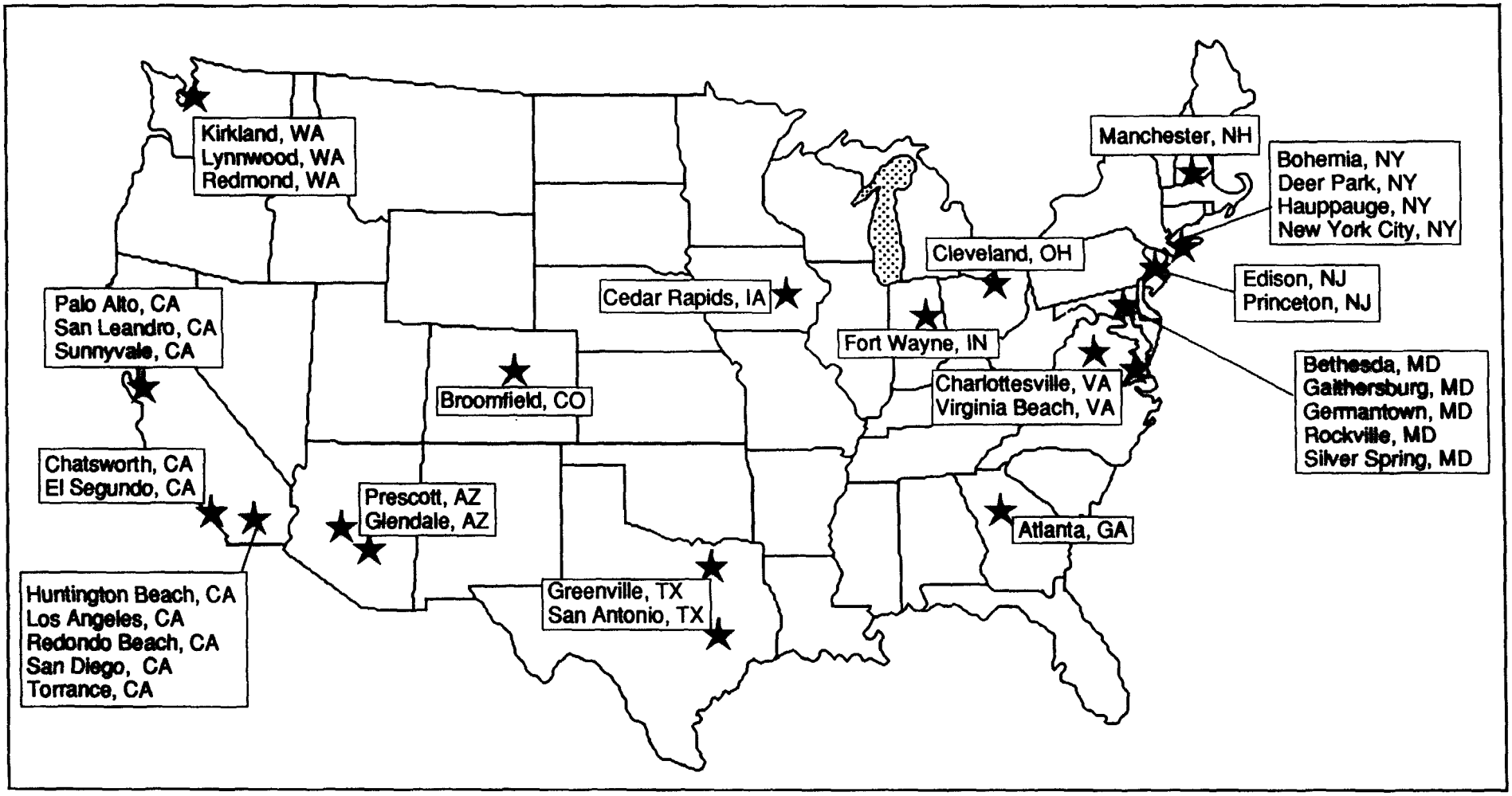
- Such services will make it possible for users to place and receive voice calls, data calls and messages anywhere in the world
- These services will complement existing cellular, paging and data networks and extend their reach to less developed countries and to remote locations
  - They also have the potential to extend the coverage of future personal communications service networks recently authorized by the FCC
- A number of such mobile satellite networks have been proposed, notably
  - IRIDIUM
  - Globalstar
  - Inmarsat P
  - Odyssey
- While these networks are global in scope, they will have significant economic impact in the U.S.

COMSAT Corporation, the U.S. representative in the international maritime satellite (Inmarsat) partnership, has developed significant service and manufacturing revenues in conjunction with Inmarsat

- COMSAT Corporation is the largest shareholder in Inmarsat (23%)
- Numerous U.S. manufacturers have been stimulated to develop terminals and satellites for Inmarsat offerings
- U.S. launch firms have participated in launching Inmarsat satellites

This briefing paper outlines the U.S. employment impact of new Inmarsat global mobile satellite networks

Inmarsat-created jobs have already had an impact in many areas of the country



In order to estimate the economic impact of new Inmarsat offerings (see page 7) on the U.S. economy, five business segments were examined:

1. Communications services
2. User terminal manufacturing
3. Satellite manufacturing
4. Satellite launches
5. Sales and distribution activities

Three steps were carried out to examine the revenues and jobs associated with the five segments

Step 1

For each of these segments, revenue associated with the U.S. component or share was isolated, e.g.:

- Communications services provided by COMSAT using Inmarsat satellites
- Inmarsat terminals produced by U.S. manufacturers
- Inmarsat satellites built by U.S. manufacturers
- Launches of Inmarsat satellites by U.S. firms
- U.S. sales and distribution activities outside of that carried out by manufacturers

Three steps were carried out to examine the revenues and jobs associated with the five segments (continued)

Step 2

Estimates of revenue required to create jobs were developed from the U.S. Space Directory – $118,866/employee

Step 3

The estimate of revenue required to support each employee was subjected to 3% annual inflation and applied to the revenue streams developed in Step 1 to provide a forecast of Inmarsat-driven jobs created between 1995 and 2005

Inmarsat A - Provides voice and data services for maritime and land mobile applications
Digital Inmarsat C - Offers low speed digital data services to small vessels, truck fleets, and aircraft

Aeronautical Services - Secure voice, data modem capability and fax transmission services for international flights
Digital Inmarsat M - Services for briefcase-sized terminals providing voice, fax and data services (ISDN-type services)
Digital Inmarsat B - High speed data and large volume communications services (earth stations in Southbury, CT and Santa Paula, CA)

Inmarsat P - Global mobile voice, data and messaging services for individuals using laptop sized, large handheld portable terminals and paging terminals. Inmarsat P is a competitive service to IRIDIUM and we assumed Inmarsat P and Iridium would each have 50% of the market

Two classes of services were evaluated in the analysis:

1 Current and new offerings

- Inmarsat A
- Inmarsat C
- Aeronautical services
- Digital Inmarsat M
- Digital Inmarsat B

2 Future offerings to be rolled out in the year 1998

- Inmarsat P

Number of New U.S. Service Jobs Created by Year

	1995	2000	2005
Current and New Inmarsat Offerings	2,100	4,700	7,800
Inmarsat P	N.A.	275	2,000
Total	**2,100**	**4,975**	**9,800**

To estimate the job creation value to U.S. terminal manufacturers, we conservatively assumed a 25% U.S. share of all Inmarsat terminal revenue

	1995	2000	2005
Current and New Inmarsat Offerings	4,300	10,400	9,100
Inmarsat P	N.A.	300	3,650
Total	**4,300**	**10,700**	**12,750**

Since satellite manufacturing is a particular U.S. strength, we have assumed a 60% share of satellite sales to Inmarsat in this segment

Number of New U.S. Satellite Manufacturing Jobs Created By Year:			
	1995	**2000**	**2005**
Current and New Inmarsat Offerings	3,600	–	1,200
Inmarsat P	N.A.	3,300	400
Total	**3,600**	**3,300**	**1,600**

To estimate the job creation value of launches for current and new Inmarsat offerings (Inmarsat 3 satellites)

- We valued the U.S. share of four current Inmarsat launch contracts at 50%
- We also assumed four more launches after the year 2000, of which the U.S. would get a 50% share

Since the orbit configuration for Inmarsat P launches has not been finalized, we have assumed two different configurations and taken the mid-point of these estimates:

Intermediate orbit - 15 satellites (2 satellites per launch by 2000), plus three spares on the ground, of which the U.S. would get one-third share

Geosynchronous orbit - 4 satellites plus one spare in the air plus one on the ground (U.S. gets one-third share)

U.S. Satellite Launch Jobs Created by Year

	1995	2000	2005
Current and New Inmarsat Offerings	5,700	–	1,100
Inmarsat P	N.A.	7,200	430
Total	**5,700**	**7,200**	**1,530**

For current and new Inmarsat offerings, sales and distribution activities are largely handled directly by manufacturers

- In the case of Inmarsat P, wider distribution is required to reach members of the target market in the general public (e.g. high income travelers, executives)

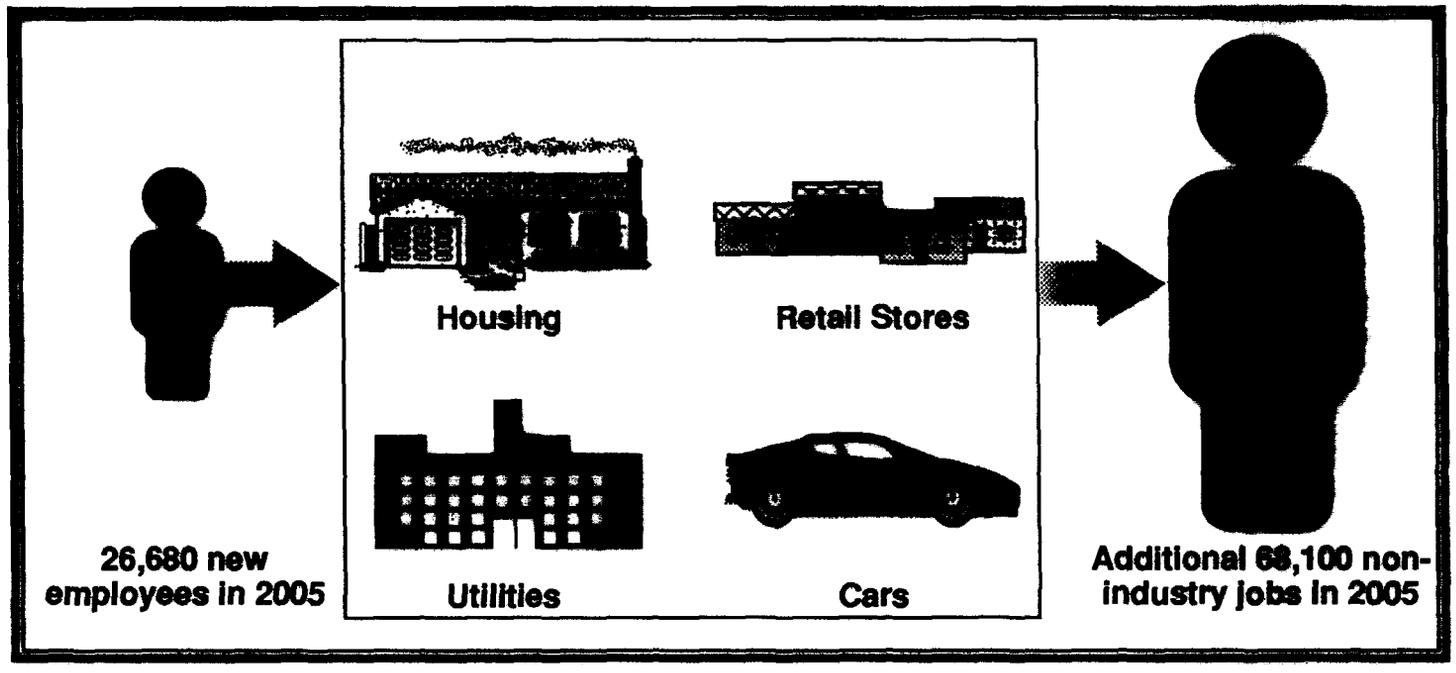
To perform this analysis, we used projected costs of outside cellular sales and distribution to determine the number of jobs which Inmarsat P will create

Jobs Created by Year			
	1995	2000	2005
Inmarsat P	N.A.	150	1,000

In the out-years (2000 and beyond), Inmarsat activities will generate/ sustain over 26,000 new jobs

U.S. Jobs Created by Year:			
	1995	**2000**	**2005**
Communications Services	2,100	4,975	9,800
Terminal Manufacturing	4,300	10,700	12,750
Satellite Manufacturing	3,600	3,300	1,600
Satellite Launches	5,700	7,200	1,530
Outside Sales and Distribution	N.A.	150	1,000
Total	**15,700**	**26,325**	**26,680**

[illegible] purchase goods and services



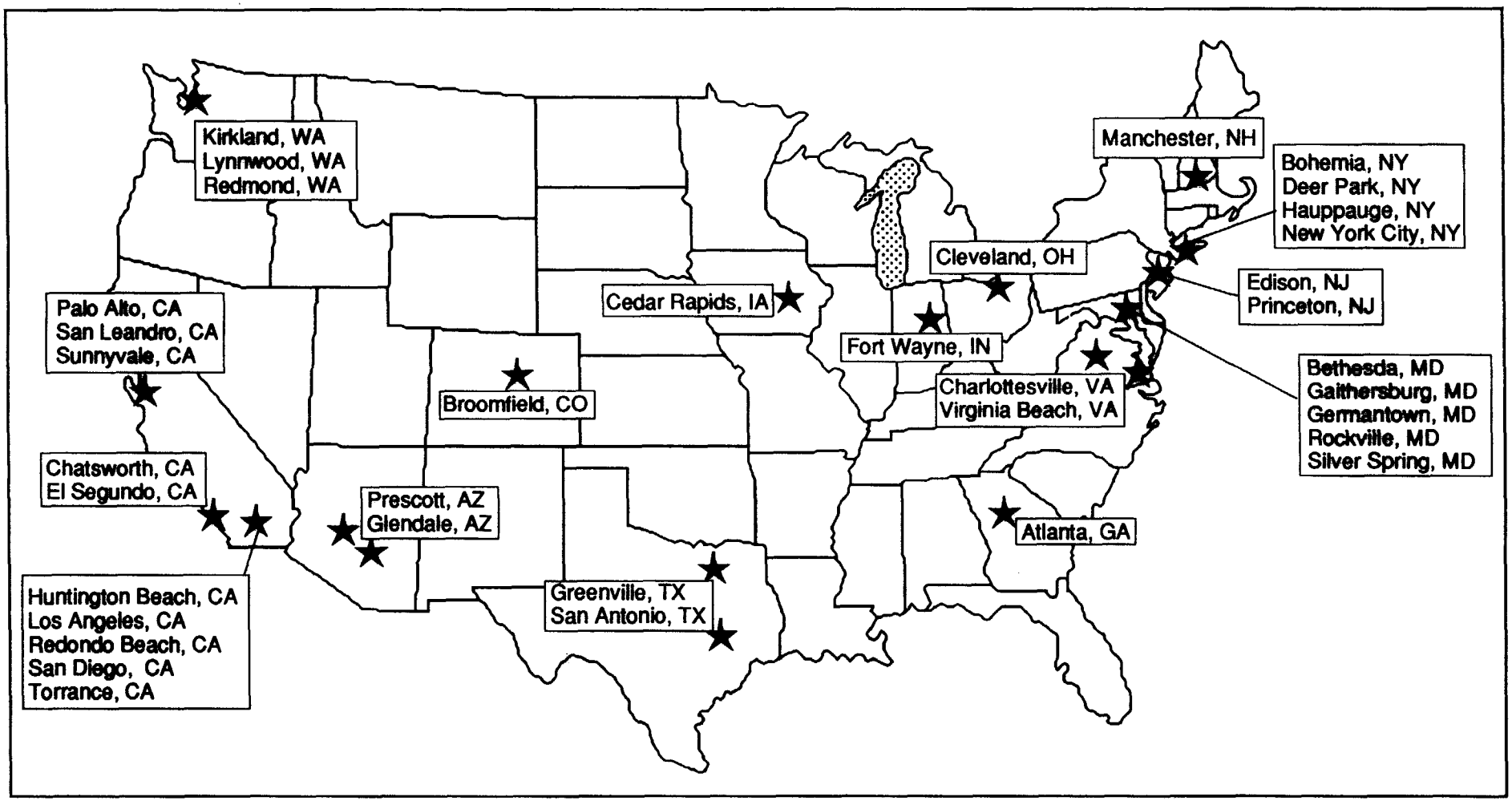
The total impact is over 90,000 jobs by 2005

* Multipliers were drawn from U.S. Department of Commerce statistics (Bureau of Economic Analysis)

Inmarsat activities will directly and indirectly generate employment for over 90,000 Americans by the year 2000

	1995	2000	2005
Directly Created Jobs	15,700	26,325	26,680
"Ripple" Effect Jobs	39,400	65,700	68,100
Total Jobs	**55,100**	**92,025**	**94,780**

Inmarsat-created jobs will have an impact in areas of the country which are being hard hit by military and defense industry cutbacks



Several conclusions can be drawn from this analysis

1. Inmarsat's current and planned activities will directly produce significant numbers of new high-paying U.S. jobs

2. COMSAT's participation in Inmarsat P will further extend the job creation impact of Inmarsat's activities beyond the year 2000

3. Expenditures by these highly-paid employees will contribute to broader employment growth in their home communities

4. These job-creation impacts will be felt in some of the same industries and communities which are hardest hit by military base closings and defense industry cutbacks

5. Early, favorable decisions to implement Inmarsat P will have a significant, positive impact on U.S. jobs, investment and global competitiveness